



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,525	11/05/2003	Masanari Furiki	H6808.0027/P027	5936
24998	7590	08/24/2004	EXAMINER	
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP 2101 L STREET NW WASHINGTON, DC 20037-1526			SOUW, BERNARD E	
			ART UNIT	PAPER NUMBER
			2881	

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/700,525	FURIKI ET AL.	
	<b>Examiner</b> Bernard E Souw	<b>Art Unit</b> 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 05 November 2003.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-9 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 1-4,6,7 and 9 is/are allowed.  
 6) Claim(s) 5 and 8 is/are rejected.  
 7) Claim(s) 8 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 05 November 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/02/2004</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), (JP 2002-321958), filed 11/06/2002, which papers have been placed of record in the file.

***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Objection***

3. Claim 8 is objected because the word "defector" in line 2 is misspelled.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 5 and 8 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nara et al. (USPAT 6,388,747).

► Regarding claim 5, Nara et al. disclose in Fig.2 a method for forming an image in which a charged particle beam (CPB) 34 is scanned on a sample 24 to form an image

(of secondary electrons 71,72) of the scanned area, as recited in Col.7/II.37-67 and Col.8/II.1-23, wherein the CPB is irradiated selectively onto a specified portion, as recited in Col.8/II.24-44, so as to form a carbon-base deposit, i.e., contamination, on the specified portion, as recited in Col.33/II.28-32.

Note, the contamination deposit is a natural result of electron beam irradiation that cannot be avoided or suppressed during an SEM scan, as expressly recited in Col.33/II.32-34. Claim 5 does not recite that this contamination deposit is being used as a mark for image analysis.

► Regarding claim 5, Nara et al. disclose in Fig.2 a CPB apparatus 16 comprising a CPB source 25, a scanning deflector 30 for scanning a CPB 34 released from the CPB source 25 on a sample 24, as recited in Col.6/line 59 and Col.8/II.27-32, an image shift deflector and/or sample stage XY for changing the scanning position of the scanning deflector on the sample, as recited in Col.8/II.24-44, and a sample image display unit 62,82 for forming an image based on the detection of charged particles 71, 72 released from the sample 24, as recited in Col.8/II.63-67 and Col.9/II.1-8,

wherein the CPB apparatus 16 additionally comprises a control unit 82 recited in Col.8/II.63-67 for setting the scanning position of the CPB on the sample 24 based on the position information obtained by means of another inspection apparatus 48,49 specifically recited in Col.8/II.53-62 for controlling the image shift deflector and/or sample stage XY to thereby shift the scanning position based on a carbon deposit contamination formed on the sample, as recited in Col.33/II.41-55.

As in claim 5, the contamination deposit is here a natural result of electron beam irradiation that cannot be avoided or suppressed during an SEM scan, as expressly recited in Col.33/ll.32-34.

***Allowable Claims***

5. Claims 1-4, 6, 7 and 9 are allowed.

***Reasons for Allowance***

6. Claims 1, 6, 7 and 9 are allowed for reciting a charged particle beam method and apparatus for inspecting circuit pattern areas based on secondary charged particle emission from the irradiated target to form images of the irradiated area to detect a defect or a foreign particle in the circuit to be used for observation or analysis of the defect based on an electric charging or carbon deposit formed on the circuit as a mark, the latter being a specific limitation that is neither anticipated nor rendered obvious by any prior art.

Claim 6 is specifically allowed for additionally transferring the sample to a second CPB and using the charge or deposit mark for position specification, which is a limitation that is neither anticipated nor rendered obvious by any prior art.

7. Claims 2-4 are allowed for being dependent, either directly or indirectly, to the allowed claim 1.

Art Unit: 2881

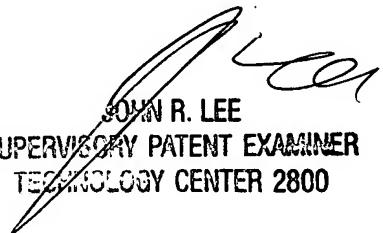
***Communications***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard E Souw whose telephone number is 571 272 2482. The examiner can normally be reached on Monday thru Friday, 9:00 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571 272 2477. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications as well as for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

bes  
August 17, 2004

  
JOHN R. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800